Blue Group Session 1

Education

NOT YET PUBLISHABLE
December 13, 2012 ~3:30pm
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Topic: Education
Note-taker: Sharon Franks

Elizabeth Nolan: Childlike thinking is creative and has led to breakthroughs
Jan Pulah: Wow factor needed. Outside of labs we're not getting students into computational modeling. Involve schools, museums. Need new blood to get funding. Don't rely on people to find us. Need outreach
Chandra: Invited seminars, workshops, conferences sometimes by invitation only can achieve broadening. Banff and Germany modeling workshops.
Jan: Multiscale modeling group meets every year. Not everyone knows about all the cools stuff going on
EN: Modeling of Beethoven's sonatas in Toronto. How we model different things in our lives. Need dynamic representations
Steven Nanis (Max): How to attract undergrads? Step through building simulation. Involve them in choosing parameters. Don't just show them a simulation. Recognize math phobia and start with basic principles and steps.
UCSD Student: Require a modeling course. Demystify modeling. Would like to say some common foundation in learning across institutions to facilitate communication. Teach basic symbolic representation of biology.
Gareth Morgan: Teach that modeling is foundational. Don't necessarily need to program. Make sure students have an intro to simple modeling. Bring quantitative approach early.
Jan: What is a simple model?
Les Lowe's Virtual Cell
Chandra Baja: Simple means simple to use, not necessarily a simple model. Some modeling courses are run like teaching you how to drive a car. Others focus more on car mechanics. What are the goals? Theoretical? Lots of modeling exercises done without even thinking about simulation. What is the right model depends on needs.
Anna Tarakanova: Important for computational people and experimentalists to talk to each other. Work on asking the right questions.
Chandra: In the age of specialization. Within experimentalists, there are designers and conductors of experiments.
Tor Gjoen: Need to start in high school. Two camps, those more and less proficient at math. Start computational training early.